

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Gerd Hofmann et al.

Art Unit : 2833

Serial No. : 10/518,907

Examiner : Felix O. Figueroa

Filed : October 21, 2005

Conf. No. : 5392

Title : BRANCHING DEVICE FOR AN ELECTRIC LINE

**Mail Stop Amendment**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

RESPONSE IN REPLY TO ACTION OF APRIL 12, 2007

Claims 1 and 25-45 are pending, with claim 1 being independent. No claims have been added or amended. No new matter has been introduced.

Claims 1, 25-40 and 43-45 have been rejected as being obvious over U.S. Patent No. 6,019,627 (Embo) in view of U.S. Patent No. 5,257,945 (Heng). Claims 42 and 43 have been rejected as obvious further in view of U.S. Patent No. 6,071,145 (Toly). Applicants requests withdrawal of these rejections because any proper combination of Embo, Heng, and Toly would still fail to describe or suggest the "at least one electrically conducting wire terminal that provides a branching contact, is accommodated in a holder, and includes contact lips with cutting edges for cutting through insulation of a wire to be connected to the wire terminal, wherein the at least one wire terminal further includes at least one connecting lug which protrudes above the holder and a through-channel for the uninterrupted passage of the wire" and the "holding-down clamp [that] holds the wires in the through-channel of the wire terminals" and "exhibits a transverse plate that closes off the through-channel and has an opening through which the connecting lug of the wire terminal protrudes," as recited by claim 1.

In applicants' previous response, the independent claim was amended to clarify the differences between the claim and the cited references. The subsequent Office Action of April 12, 2007 upheld the rejection in view of the newly clarified claim features. In this response, applicants further note the differences between the cited references and the previously amended claims. In particular, this response further clarifies that (1) one electrically conductive wire terminal with the recited features is not disclosed or suggested by the multiple separate structures

pointed to by the Office Action. Also, this response further clarifies that (2) the holding-down clamp that holds the wire in the through-channel of the wire terminal and (3) the transverse plate that closes off the through-channel and is exhibited by the holding-down clamp are not shown by the housing and plug body pointed to by the Office Action.

Embo is directed to a plug connector with a lower part and a cover including a number of insulation displacement contacts (IDCs). *See Embo, Fig. 1, numbers 1 and 3, and Fig. 2, number 8.* The IDCs are used for inserting at least one conductor of a cable, *See Embo, Fig. 1, numbers 6 and 7, and are seen to be included in pairs with a slot and fork limbs 11.* *See Embo, Fig. 3, numbers 8, 10, and 11.* In the IDCs, the “conductors 6 are pressed into the IDC contacts 8 and make contact with the IDC contacts, by the underneath of the cover 3, as a result of the screws 19 and 20 being screwed in and tightened.” *See Embo, column 6, lines 10-23.*

Initially, Embo does not describe or suggest the claimed feature of the recited wire terminal. In particular, as recited in independent claim 1, the wire terminal provides a branching contact, is accommodated in a holder, includes contact lips with cutting edges for cutting through insulation of a wire to be connected to the wire terminal, includes at least one connecting lug which protrudes above the holder, and includes a through-channel for the uninterrupted passage of the wire. Rather, Embo describes a plurality of separate structures which the Office Action relies upon as somehow disclosing the listed features of the wire terminal. In particular, the Office Action disregards the claimed relationship between the wire terminal and the features of wire terminal in order to reject the features piecemeal.

For example, the Office Action relies upon Embo’s disclosure of the plug contact 4 as the claimed connecting lug (which the claim recites is included in the wire terminal). *See Office Action, page 2.* In contrast to being a part of a wire terminal including the features recited above, Embo’s plug contact 4 is separate from the structures of Embo which the Office Action cites as the holder, contact lips, and the through channel. Moreover, and further to the point that the plug contact 4 is not a part of a wire terminal, Embo states that the plug contact 4 is contained in the plug body 5 which protrudes from the housing. *See Embo, column 5, lines 12-13.* For these reasons, Embo’s disclosure of the plug contact 4 does not describe or suggest the

connecting lug of the claimed wire terminal, and consequently, Embo fails to describe or suggest the claimed wire terminal.

Further, Embo does not describe or suggest the claimed feature of holding-down clamp that holds the wires in the through-channel of the wire terminals. The Office Action relies on Embo's disclosure of a plug body 5 and guides 13 as forming the holding-down clamp with respect to the housing 3. *See* Office Action, pages 3 and 6. In particular, the Office Action is best understood as relying on the space between the guides 13 as the through-channel. As shown by Fig. 1 of Embo, the plug body 5 and the guides 13 do not form a clamp and do not hold the wires in the through-channel of the wire terminal. Whether viewed in isolation or with the guides 13 and housing 3, the plug body 5 is not involved in holding the wires in the through-channel. Rather, the plug body 5 contains the plug contact 4, as described above. Instead of somehow using the plug body 5, Embo explicitly states that the conductor 6 (i.e., the wire) is contained using screws 19 and 20 to press the conductor 6 into the contacts 8 by connecting the lower part 3 and the cover 1. *See* Embo, column 6, lines 10-23.

Moreover, Embo does not describe or suggest the claimed transverse plate that closes off the through-channel and is exhibited by the holding-down clamp. The Office Action suggests that a plate on the underside of Fig. 1 closes off the through channel from the exterior. *See* Office Action, pages 3 and 6. Applicants note that the claim language includes a transverse plate that closes off the through-channel rather than closes off the exterior. As described above, the Office Action is best understood as relying on the space between the guides 13 as the through-channel. In Embo, no transverse plate closes off the space between the guides 13. Therefore, in Embo, no transverse plate closes off the through-channel. Furthermore, the claim language states that the transverse plate that closes off the through-channel is exhibited by the holding-down clamp. The IDC's housing does not constitute a holding-down clamp and does not close off the through-channel as claimed.

Heng is directed to a connection terminal with a single slotted connection unit. *See* Fig. 1, number 102. The unit includes two slots or slits at opposite ends for retaining and stripping a wire. *See* Fig. 1, numbers 5 and 6. Corresponding to the slot or slit, a first flared opening with

sharp sloping edges for a first wire section is used for stripping a wire. *See Fig. 2-3, numbers 5A, 20 and 21.* There are also two opposite support sides, each of which is essentially a plane and carries two respective other sides that slope obliquely away from each other, with the six sides defining a hollow convex hexagonal shape of the connection unit. *See Fig. 1, numbers 7, 8, and 9-12.* Neither the connection unit, nor the connection terminal in its entirety, includes the recited holding-down clamp, transverse plate, or connecting lug as claimed, nor does the Office Action contend that they do so.

Consequently, Heng does not disclose or suggest the “at least one electrically conducting wire terminal that provides a branching contact, is accommodated in a holder, and includes contact lips with cutting edges for cutting through insulation of a wire to be connected to the wire terminal, wherein the at least one wire terminal further includes at least one connecting lug which protrudes above the holder and a through-channel for the uninterrupted passage of the wire” and the “holding-down clamp [that] holds the wires in the through-channel of the wire terminals” and “exhibits a transverse plate that closes off the through-channel and has an opening through which the connecting lug of the wire terminal protrudes,” as recited by claim 1.

Toly does not correct these deficiencies of Embo and Heng, nor does the Office Action contend that it does so. Accordingly, any possible combination of Embo, Heng, or Toly would still fail to describe or suggest the “at least one electrically conducting wire terminal that provides a branching contact, is accommodated in a holder, and includes contact lips with cutting edges for cutting through insulation of a wire to be connected to the wire terminal, wherein the at least one wire terminal further includes at least one connecting lug which protrudes above the holder and a through-channel for the uninterrupted passage of the wire” and the “holding-down clamp [that] holds the wires in the through-channel of the wire terminals” and “exhibits a transverse plate that closes off the through-channel and has an opening through which the connecting lug of the wire terminal protrudes,” and withdrawal of the rejections is hereby requested.

All claims are in condition for allowance.

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PCT

No fees are believed due at this time. Please apply any charges or credits to deposit  
account 06-1050.

Respectfully submitted,

Date: July, 12, 2007

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